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Chan et al.

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- (54) **HIGH VOLTAGE JUNCTION FIELD EFFECT TRANSISTOR**
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- (52) **U.S. Cl.**
CPC **H01L 29/808** (2013.01); **H01L 29/063** (2013.01); **H01L 29/0634** (2013.01); **H01L 29/0649** (2013.01); **H01L 29/1095** (2013.01); **H01L 29/66893** (2013.01); **H01L 29/66901** (2013.01); **H01L 29/7832** (2013.01)

(58) **Field of Classification Search**
None
See application file for complete search history.

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(57) **ABSTRACT**

Provided is a semiconductor device, including: a substrate, a well region of a first conductivity type, a field region of a second conductivity type, a first doped region of the first conductivity type, and a second doped region of the second conductivity type. The well region is located in the substrate. The field region is located in the well region. The first doped region is located in the well region of a first side of the field region. The second doped region is located in the field region, wherein the first doped region is at least partially surrounded by the second doped region.

19 Claims, 6 Drawing Sheets

